



(43) International Publication Date 23 December 2004 (23,12,2004)

PCT

(10) International Publication Number WO 2004/111686 A1

- (51) International Patent Classification⁷: G01W 1/16, F03D 11/00, 1/00, H02G 13/00, G01R 29/08
- (21) International Application Number:

PCT/DK2004/000409

- (22) International Filing Date: 11 June 2004 (11.06.2004)
- (25) Filing Language:

Danish

(26) Publication Language:

English

(30) Priority Data:

PA 2003 00882

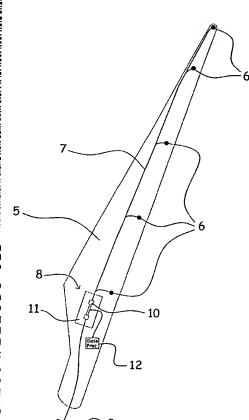
12 June 2003 (12.06.2003) DK

- (71) Applicant (for all designated States except US); LM GLASFIBER A/S [DK/DK]; Rolles Møllevej 1, DK-6640 Lunderskov (DK).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): MORTENSEN, Ivan [DK/DK]; Gl. Tvedvej 6, DK-6000 Kolding (DK).

- (74) Agent: ZACCO DENMARK A/S; Aaboulevarden 17, P.O. Box 5020, DK-8100 Aarhus C (DK).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI.

[Continued on next page]

(54) Title: REGISTRATION OF LIGTHNING STRIKE IN A WIND TURBINE



(57) Abstract: The invention relates to aspects of a method of registering lightning strikes in the blade of a wind turbine, use of such method, a system of exercising the method. The method according to the invention of registering lightning strikes involve that the method comprises that the lightning strike is captured in a receptor arranged in the blade (5) of the wind turbine, and the lightning current is conducted completely or partially through at least one electric resistor (10), thereby heating it, and that it is registered at least that the temperature of the resistor is or was at some point increased. The heating of the electric resistor, ie the increase in temperature, provides simple and reliable registration. This can be extended to also comprise measurement of the amount of energy contained in the lightning current in a very robust and hence very suitable manner for the task. By the invention it is acknowledged that if a lightning current is conducted through a suitable electric resistor, this will "capture" a share of the amount of energy in the same manner as eg an electric radiator or a furnace, ie the resistor is heated by the current as a function of the voltage and the duration and hence of the amount of BEST AVAILABLE COPY

WO 2004/111686 A1



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

with international search report

BEST AVAILABLE COPY